

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number Q96062
Mail Stop AF Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450	Application Number 10/588,935	Filed August 9, 2006
	First Named Inventor Osamu IWASAKI	
	Art Unit 2875	Examiner Danielle N. Dunn
	WASHINGTON OFFICE 23373 <small>CUSTOMER NUMBER</small>	
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.		
This request is being filed with a notice of appeal		
The review is requested for the reasons(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.		
<input checked="" type="checkbox"/> I am an attorney or agent of record. Registration number _____		 Signature
_____ Suzanne C. Walts Typed or printed name		
_____ (202) 293-7060 Telephone number		
_____ August 1, 2008 Date		

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q96062

Osamu IWASAKI

Appln. No.: 10/588,935

Group Art Unit: 2875

Confirmation No.: 2409

Examiner: Danielle N. Dunn

Filed: August 9, 2006

For: LIGHT GUIDE PLATE, AND PLANAR LIGHTING DEVICE AND LIQUID CRYSTAL
DISPLAY DEVICE USING THE SAME

PRE-APPEAL BRIEF REQUEST FOR REVIEW

MAIL STOP AF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the Pre-Appeal Brief Conference Pilot Program, and further to the Examiner's Final Office Action dated April 1, 2008, Applicant files this Pre-Appeal Brief Request for Review. This Request is also accompanied by the filing of a Notice of Appeal.

As a preliminary matter, Applicants note that claims 1-26 are all the claims currently pending in the present application.

Current Claim Rejections. As of the rejection dated April 1, 2008, claims 1-3, 5-18, 21, 23, 25, and 26 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP 08-062426 to Aihara et al. (hereinafter "Aihara") in view of JP 05-249320 to Furukawa et al. (hereinafter "Furukawa"). Claim 4 stands rejected as allegedly being unpatentable over Aihara, Furukawa, and JP 11-149073 to Kunishige. Claim 19 stands rejected as allegedly being unpatentable over Aihara, Furukawa, and U.S. Publication No. 2003/0210210 to Ide et al.

(hereinafter "Ide"). Claim 22 stands rejected as allegedly being unpatentable over Aihara, Furukawa, and U.S. Patent No. 5,402,324 to Yokoyama et al. (hereinafter "Yokoyama"). Claims 20 and 24 stand rejected as allegedly being unpatentable over Kunishige. For at least the reasons discussed below, Applicants submit that these rejections are improper, and request reversal of the outstanding rejections.

Brief Summary of the Cited References. Aihara discloses a light guide plate with a rectangular-shaped slot that accommodates a fluorescent tube. Furukawa discloses an optical waveguide device with a plurality of tabular lightguides having increasing indices of refraction and forming an inverted V-shaped groove that accommodates a light source. Kunishige discloses a pair of light transmission plates that form a rectangular gap that accommodates a light source. Ide shows a dot pattern formed on the bottom of a light guide plate. Yokoyama discloses a prism sheet arranged between a liquid crystal display panel and a diffusing member.

None of the cited references, alone or in combination, teach or suggest a light guide plate in which an end portion of a parallel groove is narrowed based on a ratio of a peak value of illuminance at a first portion of the light exit surface corresponding to the parallel groove to an average value of illuminance at a second portion of the exit light surface corresponding to inclined rear portions of the light guide plate.

The Examiner concedes that Aihara fails to teach or suggest a narrowed parallel groove.¹ Instead, Figs. 1 and 2 of Aihara show that the slot 14 has a rectangular-shaped cross section in

¹ Because the light transmission plates of Kunishige have a structure that is similar to the light guide plate of Aihara, the following argument based on Aihara also applies to the rejections over Kunishige.

which the vertical sides are parallel. However, the Examiner maintains that it would have been obvious to a person of ordinary skill in the art to modify the slot 14 of Aihara to have an inverted V-shape as disclosed in Furukawa. According to the Examiner, the motivation for modifying Aihara would have been to increase the luminance of the light guide plate 11. Applicants respectfully disagree, and submit that the Examiner is using impermissible hindsight in combining only the shape of the parallel groove of Furukawa with the light guide plate of Aihara. A person of ordinary skill in the art would not have been motivated to modify Aihara based on the teachings of Furukawa, because Furukawa uses the tabular lightguides 5a, 5b, 5c, 5d, 5e, and 5f with increasing indices of refraction to achieve a uniform brightness at the surface of the optical waveguide device, whereas the light guide plate of Aihara is formed of a single material with a uniform index of refraction. A person of ordinary skill in the art would not have modified the slot 14 of Aihara to have an inverted V-shape without also modifying the light guide plate of Aihara to include a series of materials with increasing indices of refraction. This would be contrary to the claims of the present invention, which recite that the light guide plate is formed of a single material with a uniform index of refraction.

Further, the Examiner concedes that neither Aihara nor Furukawa discloses that the parallel groove is narrowed based on the claimed ratio. However, the Examiner maintains that it would have been obvious to narrow the V-shaped groove based on the claimed ratio, because “where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only ordinary skill in the art.” Applicants respectfully disagree.

The MPEP states: “A particular parameter must be first recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.” (MPEP § 2144.05 (II)(B), *citing In re Antonie*, 559 F.2d 618 (CCPA 1977)). The claim at issue in *In re Antonie* recited a wastewater treatment device that had a ratio of tank volume to contractor area of 0.12 gal./sq.ft. The prior art did not recognize that the desired result (large treatment capacity) was a function of the ratio of the tank volume to the contractor area. Thus, the court held that the parameter (ratio of tank volume to contractor area) that would have to be optimized to achieve the claimed limitation was not recognized in the art to be a *result-effective variable*. (*Id.*)

Similarly, none of the cited art recognizes that *any* desired result is a function of the sectional shape of the parallel groove. For example, none of the cited art recognizes that adjusting the sectional shape of the narrowed parallel groove would affect the amount or distribution of luminance from the light guide plate. On the contrary, Furukawa uses the tabular lightguides 5a, 5b, 5c, 5d, 5e, and 5f with increasing indices of refraction to achieve a uniform brightness at the surface of the optical waveguide device (¶¶ [0021] – [0022], [0047]).

Therefore, the sectional shape of the narrowed parallel groove recited in the claims is not recognized in the art to be a *result-effective variable*. Consequently, it would not have been obvious to a person of ordinary skill in the art to optimize this parameter. Specifically, it would not have been obvious to a person of ordinary skill in the art to narrow the parallel groove based on the recited ratio.

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In response to the above arguments, the Examiner asserts that Applicants are arguing an inherent property of Aihara and Furukawa. Applicants respectfully disagree. Evidence of inherency in a reference “must make it clear that the missing descriptive matter is *necessarily present* in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” MPEP § 2112 IV (emphasis added). On the contrary, Applicants submit that a parallel groove that is narrowed in accordance with the claimed ratio is not *necessarily present* in any of the cited references, and is therefore not an inherent property of the cited references. Further, Applicants note that the Examiner has not specifically addressed the patentability of the method recited in claims 25 and 26.

Conclusion. In view of the foregoing, Applicants submit that the Examiner has failed to establish a *prima facie* case of unpatentability of claims 1-26. Thus, claims 1-26 are patentable over Aihara, Furukawa, Kunishige, Ide, and Yokoyama. Applicants respectfully request reversal of the outstanding rejections.

Respectfully submitted,



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